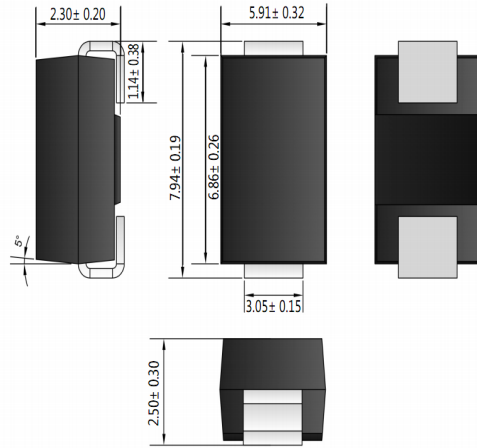


### Features

- Low Forward Voltage
- Epitaxial Construction with Oxide Passivation
- Guard Ring for Transient and ESD Protection
- Surge Overload Rating to 150A Peak
- Low Power Loss
- Fast Switching
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

### SMC /DO-214AB



### Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version**

### Maximum Ratings @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	SK82	SK83	SK84	SK85	SK86	SK88	SK89	S810	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>									
Working Peak Reverse Voltage	V <sub>RWM</sub>	20	30	40	50	60	80	90	100	V
DC Blocking Voltage	V <sub>R</sub>									
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	35	42	56	63	70	V
Average Rectified Output Current (Note 1)	I <sub>O</sub>	8.0								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	150								A
Forward Voltage @I <sub>F</sub> = 8.0A	V <sub>FM</sub>	0.55			0.75		0.85			V
Peak Reverse Current @T <sub>J</sub> = 25°C	I <sub>RM</sub>	0.5								mA
At Rated DC Blocking Voltage @T <sub>J</sub> = 100°C		50								
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	450			350				pF	
Thermal Resistance, Junction to Ambient (Note 1)	R <sub>JA</sub>	50								°C/W
Thermal Resistance, Junction to Lead (Note 1)	R <sub>JC</sub>	14								
Operating Temperature Range	T <sub>J</sub>	-55 to +125			-55 to +150				°C	
Storage Temperature Range	T <sub>STG</sub>	-55 to +150								°C

Note: 1. Mounted on FR-4 PCB with 14 x 14mm copper pads.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

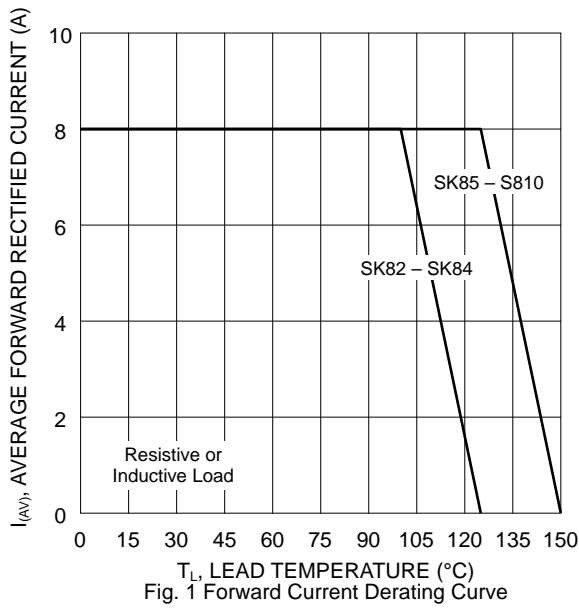


Fig. 1 Forward Current Derating Curve

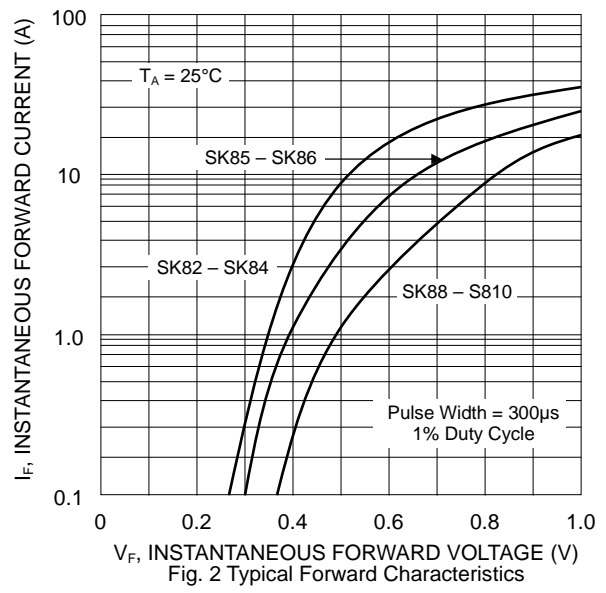


Fig. 2 Typical Forward Characteristics

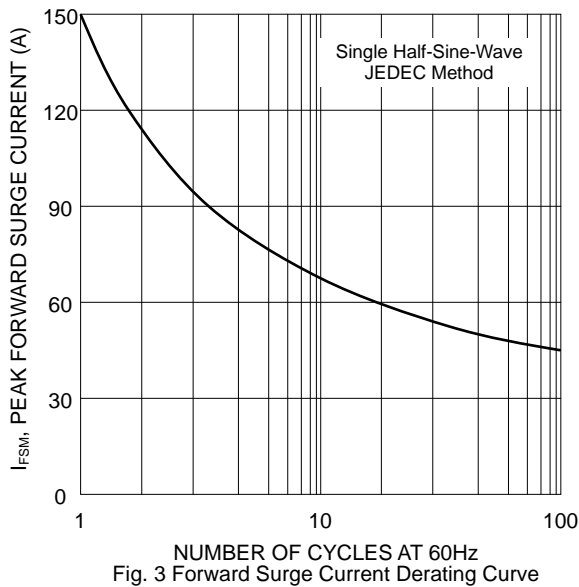


Fig. 3 Forward Surge Current Derating Curve

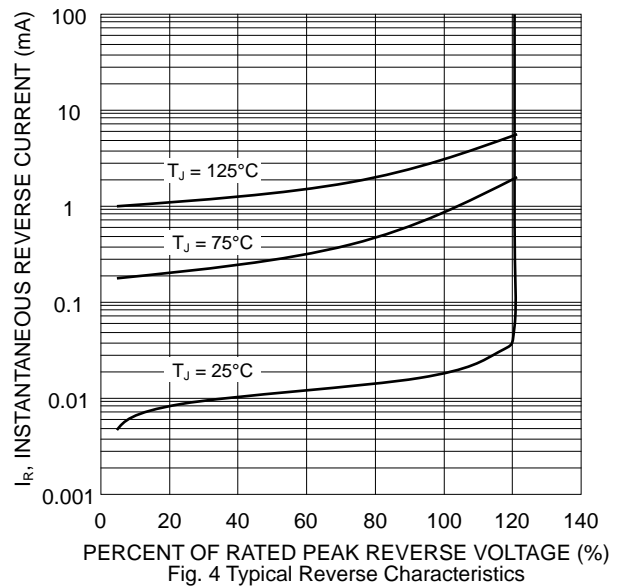


Fig. 4 Typical Reverse Characteristics

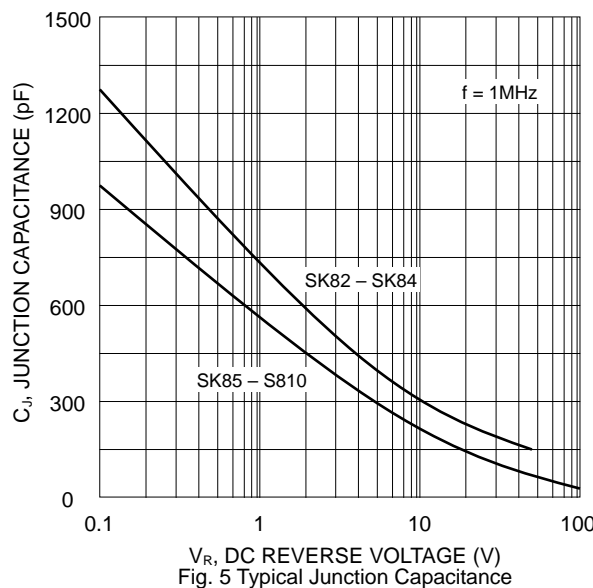
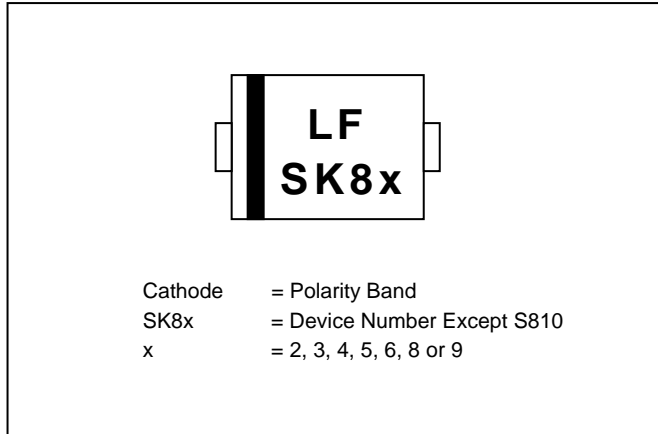
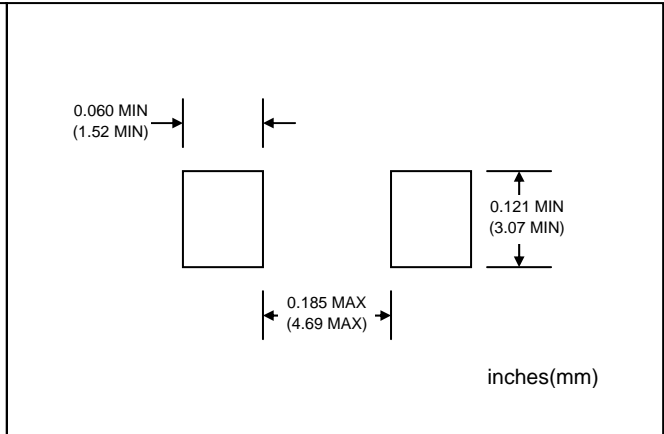


Fig. 5 Typical Junction Capacitance

## MARKING INFORMATION



## RECOMMENDED FOOTPRINT



## PACKAGING INFORMATION

### TAPE & REEL

Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
330	3,000	340 x 337 x 45	6,000	370 x 370 x 420	48,000	19.0